**3GPP TSG-RAN WG4 Meeting # 116 R4-25XXXXX**

**Bengaluru, India, 25th ‒ 29th, 2025**

**Agenda item:** 9.1

**Source:** Moderator (Apple)

**Title:** Topic summary for [115][231] Reply\_LS

**Document for:** Information

# Introduction

*This summary covers the following topic in AI 9.2, AI 9.3 and AI 9.4.*

R2-2504982 Reply LS on neighboring cell measurement for Rel-18 SSB-less

# Topic #1: Neighbor cell measurement for SSB-less SCell

*Main technical topic overview. The structure can be done based on sub-agenda basis.*

## Companies’ contributions summary

|  |  |  |  |
| --- | --- | --- | --- |
| **T-doc number** | **Company** | **Title** | **Proposals / Observations** |
| R4-2509707 | OPPO | Discussion on neighboring cell measurement for Rel-18 SSB-less | **Proposal 1: If UE indicates the support of configuration of *servingCellMO* for SCell that does not transmit SS/PBCH block, the reference SSB for intra-frequency measurement is the SSB defined in *servingCellMO* associated with SCell.**  **Proposal 2: If UE does not support this capability, any SSB of the neighbour cell which falls into the cell bandwidth of the SCell is defined as inter-frequency SSB, provided that the associated SCell does not transmit SSB.**  **Proposal 3: Whether the intra-frequency SSB or inter-frequency SSB based measurement needs gap depends on whether such SSB is fully within the active BWP of the SCell.** |
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## Open issues summary

*Before Meeting, moderators shall summarize list of open issues, candidate options and possible WF (if applicable) based on companies’ contributions.*

RAN2 have discussed the presence of *servingCellMO* for SSB-less SCell and the impact on neighbour cell measurements and reached the following agreements:

Introduce per UE capability to indicate whether the UE supports the configuration of *servingCellMO* for SCell that does not transmit SS/PBCH block. A UE supporting this feature shall also support NR intra-frequency measurements on neighbour cells based on *servingCellMO* associated with SCell that does not transmit SS/PBCH block. NW can optionally configure *servingCellMO* for SCell that does not transmit SS/PBCH block if UE indicate such capability.

RAN2 respectfully asks RAN4 to take the above agreements into account.

### Sub-topic 1-1

*Sub-topic description:*

*Open issues and candidate options before meeting:*

**Issue 1-1: how to treat the measurement for UE indicating support of servingCellMO for SCell that does not ransmit SS/PBCH blcok?**

* Proposals
  + Option 1: OPPO

The reference SSB for intra-frequency measurement is the SSB defined in *servingCellMO* associated with the SSB-less SCell.

* Recommended WF
  + TBA

**Issue 1-2: how to treat the measurement for UE not indicating support of servingCellMO for SCell that does not ransmit SS/PBCH blcok?**

* Proposals
  + Option 1: OPPO

Any SSB of the neighbour cell which falls into the cell bandwidth of the SCell is defined as inter-frequency SSB.

* Recommended WF
  + TBA

**Issue 1-3: whether GAP is needed for thc case in Issue 1-2?**

* Proposals
  + Option 1: OPPO

Whether the intra-frequency SSB or inter-frequency SSB based measurement needs gap depends on whether such SSB is fully within the active BWP of the SCell.

* Recommended WF
  + TBA